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09/923,993	08/08/2001	Shinichi Hakamada	35.C.15659	1201

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EXAMINER

FAISON, VERONICA F

ART UNIT	PAPER NUMBER
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1755

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DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/923,993

Applicant(s)

HAKAMADA ET AL.

Examin r

Veronica F. Faison

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) 37-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-36, drawn to ink composition, classified in class 106, subclass 31.32.
- II. Claims 37-68, drawn to recording unit, classified in class 347, subclass 100.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the fluorescent ink can be used in a material different process such as screen-printing.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Atty. Yu-Jahnes on March 31, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-36. Affirmation of this election must be made by applicant in replying to this Office action. Claims 37-68 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3, 8, and 10-36 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-37 and 44-48 of copending Application No. 09/923,417 (US Patent Application Publication 2002/0047884 A1). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to a fluorescent ink composition.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-3, 8, and 10-36 are directed to an invention not patentably distinct from claims 1-37 and 44-48 of commonly assigned 09/923,417 (US Patent Application Publication 2002/0047884 A1). Specifically, both applications are directed to a fluorescent ink composition.

The U.S. Patent and Trademark Office normally will not institute an interference between applications, or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned 09/923,417 (US Patent Application Publication 2002/0047884 A1), discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 37 CFR 1.78(c) and 35 U.S.C. 132 to either show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 22, Applicant states that "the nonionic surfactant is contained in the ink an amount not to cause separation at the interface of the ink when the ink contains no coloring material. The Examiner is confused, because claim 1 requires a coloring material. Please clarify.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1, 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Bauer et al (US Patent 6,176,908 B1).

Bauer et al teach an aqueous fluorescent red ink jet ink comprising an aqueous vehicle, a red or magenta pigment, a polymeric dispersant, a fluorescent dye (abstract and col. 1 line 66-col. 2 line 5). The aqueous vehicle is a mixture of water and at least one water soluble or water miscible organic solvent such as glycol or glycol ether, wherein the mixture is present in the amount of 70 to 99.8 percent by weight (col. 2 lines

Art Unit: 1755

48-67). The colorant present in the ink composition contains at least one red or magenta pigment and a fluorescent red dye (Acid Red 52). The ink may also contain a yellow pigment and/or yellow dye, which may be either fluorescent or non-fluorescent. The pigments may be present in the composition in the amount of 0.1 to 5 percent by weight. The fluorescent red dye is present in the amount of 0.05 to 2 percent by weight (col. 3 lines 1-23). See Table 1 and examples for specific examples of the claimed invention. The composition as taught by Bauer et al appears to anticipate the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9-12, 32, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al (US Patent 6,176,908 B1).

Bauer et al teach an aqueous fluorescent red ink jet ink comprising an aqueous vehicle, a red or magenta pigment, a polymeric dispersant, a fluorescent dye (abstract and col. 1 line 66-col. 2 line 5). The aqueous vehicle is a mixture of water and at least one water soluble or water miscible organic solvent such as glycol or glycol ether, wherein the mixture is present in the amount of 70 to 99.8 percent by weight (col. 2 lines 48-67). The colorant present in the ink composition contains at least one red or magenta pigment and a fluorescent red dye (Acid Red 52). The ink may also contain a yellow pigment and/or yellow dye, which may be either fluorescent or non-fluorescent. The pigments may be present in the composition in the amount of 0.1 to 5 percent by weight. The fluorescent red dye is present in the amount of 0.05 to 2 percent by weight (col. 3 lines 1-23). The reference discloses that other ingredients or additives that are typical for ink jet ink such as surfactants, biocides and humectants may be added to the ink composition (col. 3 line 66-col. 4 line 7). The reference remains silent as to which specific surfactant may be used and to whether or not the non-fluorescence coloring material is an azo dye. However, it is the position of the Examiner that any known surfactant and yellow dye, such as nonionic surfactants including Acetylenol EH and azo dyes having the properties claimed by Applicant, may be used because the reference broadly discloses surfactants and yellow dye. The reference also discloses that the ink composition may have a surface tension from about 15 to about 70 dyne/cm (col. 4 lines 20-23). Bauer et al fail to specifically exemplify a glycerin (first organic

Art Unit: 1755

compound), urea and its derivatives and a specific surfactant (second organic compound). Therefore, it would have been obvious to one of ordinary skill in the art to use the glycerin (first organic compound), urea and its derivatives and a specific surfactant (second organic compound) as claimed by applicant as Bauer also discloses the use of glycerin (first organic compound), urea and its derivatives and a specific surfactant (second organic compound) (i.e. typical additives or ingredients for ink jet ink) but shows no example incorporating them.

Claims 10-16, 18-21, 23-26, 28-30 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al (US Patent 6,176,908 B1) as applied to claims 9-12, 32, 35 and 36 above, and further in view of Teraoka et al (US Patent 5,865,883).

Bauer et al teach an aqueous fluorescent red ink jet ink comprising an aqueous vehicle, a red or magenta pigment, a polymeric dispersant, a fluorescent dye (abstract and col. 1 line 66-col. 2 line 5). The aqueous vehicle is a mixture of water and at least one water soluble or water miscible organic solvent such as glycol or glycol ether, wherein the mixture is present in the amount of 70 to 99.8 percent by weight (col. 2 lines 48-67). The colorant present in the ink composition contains at least one red or magenta pigment and a fluorescent red dye (Acid Red 52). The ink may also contain a yellow pigment and/or yellow dye, which may be either fluorescent or non-fluorescent. The pigments may be present in the composition in the amount of 0.1 to 5 percent by weight. The fluorescent red dye is present in the amount of 0.05 to 2 percent by weight (col. 3 lines 1-23). The reference discloses that other ingredients or additives that are

Art Unit: 1755

typical for ink jet ink such as surfactants, biocides and humectants may be added to the ink composition (col. 3 line 66-col. 4 line 7). The reference remains silent as to which specific surfactant may be used and to whether or not the non-fluorescence coloring material is an azo dye. However, it is the position of the Examiner that any known surfactant and yellow dye, such as nonionic surfactants including Acetylenol EH and azo dyes having the properties claimed by Applicant, may be used because the reference broadly discloses surfactants and yellow dye. The reference also discloses that the ink composition may have a surface tension from about 15 to about 70 dyne/cm (col. 4 lines 20-23). Bauer et al fail to teach a glycerin, urea and its derivatives and a specific surfactant.

Teraoka et al teach a fluorescent ink for ink jet recording comprising a dye having a pyrene ring and triethanolamine (col. 3 lines 49-51). The dye having the pyrene ring may be a water-soluble fluorescent dye such as Solvent Green 7 which may be used in the ink composition in the amount from 0.2 to 8 percent by weight (col. 3 line 56-col. 4 line 20). The reference further teaches that the pH value of the ink composition is in the range of 9 to 14 (col. 4 lines 45-50). The liquid medium of the ink composition is a mixture of water and a water-soluble organic solvent which includes ethylene glycol, diethylene glycol, glycerin (first organic compound of (i)), ethanol and isopropyl alcohol (monohydric alcohol) present in the amount of 10 to 40 percent by weight (col. 5 lines 10-34). A nonionic surfactant (second organic compound of (i)) may be present in the ink composition which includes surfactants such as ethylene oxide adducts of acetylene glycol (which is known to have the formula set forth in claim 24 and also

Art Unit: 1755

known as Acetylenol EH in examples), present in the amount of 0.01 to 10 percent by weight (col. 5 lines 40-66). Other additives such as urea and urea derivative, viscosity modifier, preservative, antioxidant and fungicide may be present in the ink composition (col. 6 lines 9-14).

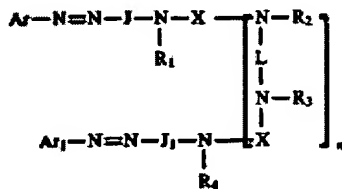
Bauer et al and Teraoka et al are combinable because they are from the same field of endeavor. Therefore it would have been obvious to one of ordinary skill in the art to use the components of Teraoka et al in the ink composition of Bauer et al because broadly discloses the specific component taught by Teraoka et al which are well known in the art.

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al (US Patent 6,176,908 B1) as applied to claim 1 above, and further in view of Saito et al (5,728,201).

Bauer et al teach an aqueous fluorescent red ink jet ink comprising an aqueous vehicle, a red or magenta pigment, a polymeric dispersant, a fluorescent dye (abstract and col. 1 line 66-col. 2 line 5). The aqueous vehicle is a mixture of water and at least one water soluble or water miscible organic solvent such as glycol or glycol ether, wherein the mixture is present in the amount of 70 to 99.8 percent by weight (col. 2 lines 48-67). The colorant present in the ink composition contains at least one red or magenta pigment and a fluorescent red dye (Acid Red 52). The ink may also contain a yellow pigment and/or yellow dye, which may be either fluorescent or non-fluorescent. The pigments may be present in the composition in the amount of 0.1 to 5 percent by weight. The fluorescent red dye is present in the amount of 0.05 to 2 percent by weight

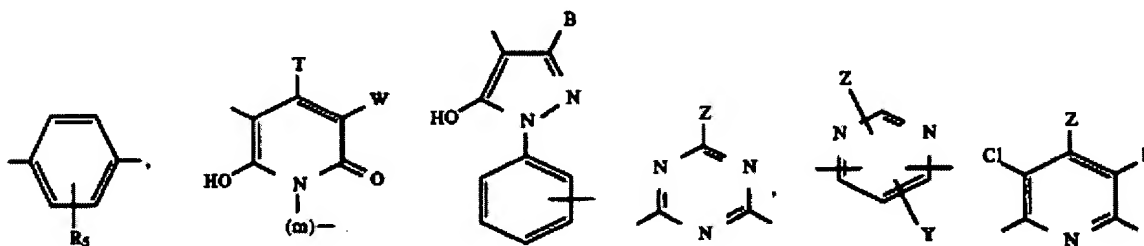
Page 11

Saito et al (US Patent 5,728,201) teach an yellow ink composition comprising at least two yellow dyes and a liquid medium dissolving or dispersing he dyes therein, wherein the ink comprises a dye represented by the following general formula (1) in the state of a free acid, and a yellow dye having a SO₃H group as a main solubilizing group in the state of a free acid (abstract and col. 2 lines 14+). The reference further discloses that Ar and Ar₁ are independently an aryl group or a substituted group selected from the group consisting of COOH and COSH, J and J₁ are independently a group selected from the group consisting of groups represented by the general formulae



Art Unit: 1755

in which R_5 is a radical selected from the group consisting of H, alkyl groups, substituted alkyl groups, alkoxy groups, halogens, CN, a ureido group and NHCOR_6 (R_6 being a radical selected from the group consisting of H, alkyl groups, substituted alkyl groups, aryl groups, substituted aryl groups, aralkyl groups and substituted aralkyl groups), T is an alkyl group, W is a radical selected from the group consisting of H, CN, $\text{CONR}_{10}\text{R}_{11}$, pyridinium and COOH , (m) is an alkylene chain having 2 to 8 carbon atoms, and B is a radical selected from the group consisting of H, alkyl groups and COOH , R_1 , R_2 , R_3 , R_4 , R_{10} and R_{11} are independently a radical selected from the group consisting of H, alkyl groups and substituted alkyl groups, L is a divalent organic bonding group, n is 0 or 1, X is a carbonyl group or a group selected from the group consisting of groups represented by the general formulae



in which Z is a group selected from the group consisting of OR_7 , SR_7 , and NR_8SR_9 , Y is a radical selected from the group consisting of H, Cl, CN and Z, E is a radical selected from the group consisting of Cl and CN, and R_7 , R_8 , and R_9 are independently a radical selected from the group consisting of H, alkenyl group, substituted alkenyl groups, alkyl groups, substituted alkyl groups, aryl groups, substituted aryl groups, aralkyl groups and substituted aralkyl groups, or R_8 and R_9 form a 5- or 6-membered ring together with the

Art Unit: 1755

nitrogen atom to which they are bonded, with the proviso that (1) Ar and Ar₁ have at least two groups selected from COOH and COSH where they have no SO₃H group, or (2) Ar and Ar₁ have groups selected from COOH and COSH of at least the same number as the number of SO₃H groups where they have one or more SO₃H groups (col. 2 line 19-col. 3 line 62 and col. 5 line 50-col. 7 line 10). The reference discloses that dyes having the structures as the above may be a direct dye such as direct yellow 86 (col. 13 lines 35-41).

Therefore it would have been obvious to one of ordinary skill in the art to use the direct dye of Saito et al in the ink composition of Bauer et al, because Bauer et al discloses that an additional yellow dye may be used which is broad enough to encompass the yellow dye taught by Saito et al.

Conclusion

The remaining references listed on forms 892 and 1449 have been reviewed by the Examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 703-305-3918. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on 703-308-3823. The fax phone numbers for the

Art Unit: 1755

organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Veronica F. Faison
May 5, 2003



Mark L. Bell
Supervisory Patent Examiner
Technology Center 1700